

Stage 02: Workgroup Report

0430:

Inclusion of data items relevant to smart metering into existing industry systems

At what stage is this document in the process?



This modification seeks to obligate shippers to provide information from their suppliers that will be required for the implementation of the DECC programme for Smart Metering.



The Workgroup recommends that this modification should proceed to Consultation



High Impact:



Medium Impact:
Shippers, Transporters

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About this document:

This report will be presented by the Workgroup to the panel on 17 January 2013.

The panel will consider whether the modification is sufficiently developed to proceed to Consultation and to submit any further recommendations in respect of the definition and assessment of this modification.

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1 Summary

Is this a Self-Governance Modification?

The Modification Panel determined that this is not a self-governance modification.

Why Change?

The Department of Energy and Climate Change (DECC) is currently progressing the Smart Metering Implementation Programme (SMIP) with an aim to establishing a central smart metering Data Communications Company (DCC) in 2014 together with a Smart Energy Code (SEC) as a governance framework. To facilitate this DECC, through their working groups, have identified changes to existing industry codes that will be required to fully facilitate the SMIP. These changes include, but are not limited to, additional data items that will allow incoming suppliers to identify the existence of Smart Metering System (SMS) at a supply meter point.

The DECC programme will require information to be captured for all supply points, including those on iGT networks and relevant information provided to parties including shippers and the DCC when it is established. In order to meet the requirements at the start of mass roll-out it is expected that data capture will be required from Q2 2013.

Suppliers will have licence obligations to install SMS at domestic premises and the capture, storage and transfers of this data will facilitate compliance with these obligations and provide incoming suppliers relevant information about the presence of a SMS. These obligations together with the provision of smart metering information during a change of supplier event will be mandated from Q3 2013. This will also ensure that when the DCC goes live in 2014 there will be sufficient historic data available to ensure efficient operation of the smart metering market.

Solution

It is proposed that the Transporters, in their role of holding centralised gas industry databases, will amend the central systems, known as UK Link, to capture and store the new data items and facilitate the transfer of this data as appropriate. Shippers will be obligated to provide data items which they will obtain from their suppliers.

Relevant Objectives

This modification is likely to have a positive impacts on the following Relevant Objectives:

A11.1 (d) Securing of effective competition;

A11.1 (f) Efficiency in the implementation and administration of the network code;

A11.1 (g) Compliance with European Commission and/or the Agency for the Co-operation of Energy Regulators,

and no impact on the remaining Relevant Objectives.

The ROM analysis indicates a cost of between £600k and £1m to implement this solution.

Implementation

No precise timescales for implementation are currently proposed.

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2 Why Change?

Overview

In 2010 the government announced that it intended requiring that suppliers install smart metering for gas and electricity to all domestic consumers by 2020. In order to generate the benefits of additional information that smart metering will provide, the government will establish a licensed Data Communications Company (DCC) to manage the meter readings and other data transfers and act as a central hub. The DCC, suppliers and gas transporters will be party to a Smart Energy Code (SEC) that will govern the rights and obligations of the various parties in relation to the smart metering data.

The government timetable for the roll-out of smart metering has been established and communicated as: "The mass roll-out of smart meters is expected to start in 2014 and to be completed in 2019. The majority of consumers will receive their smart meters during the mass roll-out."¹

DECC have established a smart metering implementation programme (SMIP) to consider all aspects of the creation of the DCC, the SEC and other related issues. Through SMIP various working groups have been considering how to integrate the DCC and SEC requirements into the existing industry frameworks where an interaction with those frameworks and systems is required at a future date. It is acknowledged that existing central industry systems are likely to require changes to facilitate this as well as UNC parties being obligated to provide data items that are not currently required for UNC purposes.

The DECC working group that was established to consider consequential changes to existing codes has carried out analysis of the initial requirements and considered these against the current UNC requirements and the central systems. The DECC requirement for data items is likely to result in changes to existing file flows to efficiently enable capture in the central systems of data items that will be required for the start of mass roll-out in 2014. In order to provide information to assess changes a paper was produced, Legacy System Changes (Enduring) dated 14 November Ver 2.0², detailing the work of the business process group which outlines these changes.

During further work by the DECC working groups addressing issues of data collection prior to the start of mass roll-out, known as Foundation, data items in addition to those required for the enduring model have been identified by the Foundation Interim Operating Model (FIOM). In order to also facilitate this, it would be more efficient to make all data items changes at one time and the requirements for this have been included in this modification.

Beyond the collection of the data items by the Transporters there will be a further requirement to make this information available to various parties. There will be an element of playback to shippers during the change of supplier process and there is likely to be a requirement for data to be sent to the DCC to enable access control once the DCC is established and the SEC in place. The DCC element of this is likely to also include the supply point data for iGT supply points and the obligation for shippers to provide this data to iGTs is expected to be progressed as a Modification to the iGT UNC in parallel to this Modification.

The Government has powers under section 88 of the Energy Act 2008 to make amendments to relevant industry codes to facilitate the changes necessary for smart metering. Use of these powers is currently under discussion and until such time as these are concluded the normal UNC change process is proposed for assessment and development of this aspect of the DECC programme.

¹ http://www.decc.gov.uk/en/content/cms/tackling/smart_meters/smart_meters.aspx

² <http://www.decc.gov.uk/publications/basket.aspx?filetype=4&filepath=11%2ftackling-climate-change%2fsmart-meters%2f3781-smart-metering-regulation-working-group-4--meetin.zip&minwidth=true#basket>

3 Solution

New Data Items

The DECC working groups and more detailed assessment groups have identified the data items that will be required to facilitate smart metering. During this development Xoserve, acting as the central system provider, have carried out analysis of the identified system changes and produced a Rough Order of Magnitude (ROM) based on the outputs from the Legacy System Changes (Enduring) paper.

The ROM produced aims to enable DCC data access and therefore facilitate competition where smart metering is in place. The scope of the ROM includes the provision of data extracts to the DCC including the provision of iGT data. These aspects are limited to the data transformation elements and do not include the gateway mechanism for transferring the data.

Changes proposed here relate to the provision of additional data items that will be required from suppliers to be held within the central systems. This data will need to be received, processed and responses to input files developed for suppliers (via shippers) to meet the obligations to provide this data. All new data items will be stored within the central systems with a history maintained where necessary. Data items will also be used to inform shippers of the presence of smart metering during the change of supplier process.

New data items are listed in the table below including the assumptions contained within the ROM about the data items:

| Field | Description | Issue/Assumption/Comments |
|--------------------------|---|--|
| SMS Operating Entity ID | Identifier for the Smart Metering System (SMS) Operator (SMSO) – caters for operator other than DCC | Length of field assumed to be 3 |
| SMS Operating Entity EFD | Effective From Date (EFD) | Date provided by shipper |
| DCC Service Flag | Identifies where the DCC is the SMSO | DCC service flag updated by the DCC only. Valid fields will be A=active, S=suspended, W=withdrawn, NULL=where MPRN has not had SMS installed yet |
| DCC Service Flag EFD | Effective From Date (EFD) | EFD provided by DCC |
| IHD Install Status | In Home Display (IHD). Asset details may be held by the DCC, but this will enable the incoming supplier to identify if an IHD has been declined | Will only hold status, not asset details. Valid fields will be I=install, E=existing, D=declined, NULL=where MPRN has not had SMS installed yet |
| IHD Install Status EFD | Effective From Date (EFD) | Date provided by shipper |

| | | |
|--------------------------------------|--|---|
| UPRN | Unique Preference Property Number | Likely to be blank in initial phases – requirement has been identified but method of population remains outstanding and subject to a DECC policy decision |
| Smart Meter Installing supplier ID | To assist with foundation for assigning responsibility for the installing supplier | Use of existing Supplier Short Codes. May be derived from meter installation data flows |
| Meter Type ³ | Used to specify the type of Smart Meter but within the Meter Mech field | List of possible variables: Non SMETs meter – NS SMETS1 – S1 SMETS2 – S2 SMETS3 – S3 Requirement to allow flexibility for new SMETs versions – <i>Sn</i> |
| Supplier Effective to Date (ETD) | DECC requirement based on their DSP Procurement document | Will be derived from existing data based on defined rules |
| Source Registration System ID | DECC requirement based on their DSP Procurement document | Xoserve to provide |
| Network Operator Effective From Date | DECC requirement based on their DSP Procurement document | Likely to remain static for large GTs, but may change for iGT sites which are transferred/sold |

Table 1: Smart Meter Data items

For the avoidance of doubt, these definitions are intended to reflect the business requirements of the DECC documents. The design of the interface between the various parties will be subject to detailed analysis and the list of fields in the designated interface may look different to the list outlined above.

The work carried out by Xoserve to develop a ROM has also identified that there may be further fields that are required to ensure a fully efficient solution. This includes, but is not limited to Gas Transporter ID and the Market Sector Code to identify I&C sites.

It is proposed that the Transporters (via their Agent) will make amendments to the central systems to capture these data items and enable reporting through appropriate means, e.g. SPA files, RGMA flows, Data Enquiry Service, etc. Obligations will be placed on shippers to obtain this information from their supplier and provide it the Transporters in a timely manner. New data items will not be subject to validation by the Transporter Agency.

In order to fully facilitate the smart metering market it is required that the DCC can access appropriate data and that they have suitable permission through the UNC to do this. The DCC will be a licensed body and permission will be limited to the holder of the “smart meter communication licence” as defined in Statutory Instrument 2012 No.2400: The Electricity and Gas (Smart Meters Licensable Activity) Order 2012⁴. It is proposed that the data items that will be allowed through the UNC permissions are shown in table 2 below. The permission should include the data items in Table 2 below for all large GT meter points, including those which are “DEad” and “EXTinct”. It will also allow the

³ The Meter Mechanism change may be facilitated by means of a SPAA MDD change; however, the changes required to the central systems for this are included in the overall Smart Metering data change.

⁴ <http://www.legislation.gov.uk/uksi/2012/2400/made>

Transporters to pass through the same data as provided by the iGTs for all iGT meter points.

Provision of a UPRN field is intended to ensure that future requirements are implemented efficiently. This will not initially be populated and where populated, will not be validated. Subsequent IT developments may chose to deliver full functionality of UPRNs at a later date.

Playback of Data Items

As a result of the new data items there will be a requirement for these to be played back to various industry parties through appropriate file flows. The full list of relevant data items for the facilitation of smart metering that are likely to need playback to shippers and eventually the DCC are:

- Source Registration System ID
- MPRN
- Supplier ID
- Supplier EFD
- Supplier ETD
- MAM ID
- MAM EFD
- Meter Point Address
- Meter Point Post Code
- Meter Type (Meter Mechanism Code)
- SMS Operating Entity ID
- SMS Operating Entity EFD
- DCC Service Flag
- DCC Service Flag EFD
- IHD Install Status
- IHD Install Status EFD
- UPRN (where known)
- Smart Meter Installing supplier ID
- Network Owner ID
- Network Owner ID EFD
- Market Sector Flag (Premise/Customer type)

Rules for deriving Supplier Effective to Date:

- Start date of incoming/new Supplier, or
- Start date of "blank" where a meter point is isolated/withdrawn

Rules for deriving Smart Meter Installing Supplier ID

- Registered supplier at date of installation of first smart meter – based on meter asset update flows or future installed smart meter

For clarity the data items will be transferred in the following directions:

| Data Item | Status | Shipper to GT | DCC to GT* | iGT to GT | GT to Shipper | GT to DCC** |
|-------------------------------|----------|---------------|------------|-----------|---------------|-------------|
| Source Registration System ID | New | | | x | | x |
| MPRN | Existing | x | x | x | x | x |
| Supplier ID | Existing | x | | x | x | x |
| Supplier EFD | Existing | x | | x | x | x |

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| | | | | | | |
|------------------------------------|-------------|---|---|---|---|---|
| Supplier ETD | New/Derived | | | x | | x |
| MAM ID | Existing | x | | x | x | x |
| MAM EFD | Existing | x | | x | x | x |
| Meter Point Address | Existing | x | | x | x | x |
| Meter Point Postcode | Existing | x | | x | x | x |
| Meter Mechanism Code | Modified | x | | | x | |
| SMS Operating Entity ID | New | x | | | x | |
| SMS Operating Entity EFD | New | x | | | x | |
| DCC Service Flag | New | | x | | x | |
| DCC Service Flag EFD | New | | x | | x | |
| IHD Install Status | New | x | | | x | |
| IHD Install Status EFD | New | x | | | x | |
| UPRN (where known) | New | x | | x | x | x |
| Smart Meter Installing Supplier ID | Derived | x | | | x | |
| Network Owner ID | Existing | | | x | x | x |
| Network Owner EFD | New | | | x | | x |
| Market Sector Flag | Existing | x | | x | x | x |

Table 2: Data permissions and flows

*Outside scope of UNC Modification 0430. Likely to be an obligation on the DCC under the SEC to pass to the relevant Transporters.

**Permission to release data to the Licensed DCC

It should be noted that iGT UNC Modification 047⁵ has been raised by ES Pipelines to include the same data requirements. This will ensure that consistency is achieved across the gas industry for the enablement of the DCC and the smart metering regime.

For clarity, this solution will create the following changes to the UNC:

- New obligation for shippers to provide data items as listed in table where a Smart Metering System is installed
- Provide permission for the GTs to release data items as listed in the table to the holder of the "smart meter communication licence" as defined in Statutory Instrument 2012 No.2400: The Electricity and Gas (Smart Meters Licensable Activity) Order 2012, including data relating to iGT Supply Meter Points

Timing of the changes may be phased to ensure that the existing Supplier Effective Switching obligations can be fulfilled at the earliest opportunity. A SPAA change has been raised to allow the new Allowable Values to the Meter Mechanism Code and a further SPAA change to Schedule 23 is intended to permit the publication of this and the installing supplier on the existing Data Enquiry Service.

⁵ <http://igt-unc.co.uk/Modifications/Open+Modifications/iGT047>

User Pays

Classification of the modification as User Pays, or not, and the justification for such classification

This modification will be funded by User Pays arrangements as it will be facilitating the smart metering requirements of the supplier licence, making them the beneficiaries of the change.

Identification of Users, proposed split of the recovery between Gas Transporters and Users for User Pays costs and justification

It is proposed that costs for implementation of the change be borne 100% by shippers. As the result of workgroup discussions it is proposed that two options for funding are considered for this change:

- 100% ALL shippers split by registered meter point count
- 100% mandated shippers by registered mandated meter point count (Domestic or <11 cubic meters per hour)

This aspect should be developed to agree the appropriate basis.

Proposed charge(s) for application of Users Pays charges to Shippers

No additional charges are currently anticipated for the enduring capture of the data.

The ROM analysis indicates a cost of between £600k and £1m to implement this solution.

Proposed charge for inclusion in the Agency Charging Statement (ACS) – to be completed upon receipt of a cost estimate from Xoserve

To be completed before a modification is issued to consultation

4 Relevant Objectives

| Impact of the modification on the Relevant Objectives: | |
|--|-------------------|
| Relevant Objective | Identified impact |
| a) Efficient and economic operation of the pipe-line system. | None |
| b) Coordinated, efficient and economic operation of (i) the combined pipe-line system, and/ or (ii) the pipe-line system of one or more other relevant gas transporters. | None |
| c) Efficient discharge of the licensee's obligations. | None |
| d) Securing of effective competition: (i) between relevant shippers; (ii) between relevant suppliers; and/or (iii) between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers. | Positive |
| e) Provision of reasonable economic incentives for relevant suppliers to secure that the domestic customer supply security standards... are satisfied as respects the availability of gas to their domestic customers. | None |
| f) Promotion of efficiency in the implementation and administration of the Code | Positive |
| g) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators | Positive |

A11.1 (d) Securing of effective competition – gas suppliers will have licence obligations to install Smart Metering Systems (SMS) from 2013 and to use the central Data Communications Company (DCC) for carrying out smart metering activity. In order to ensure that an incoming supplier is aware of the presence of a SMS at a property so that they can offer appropriate terms to new customers, it is essential that the information proposed is captured, stored and issued appropriately to ensure the efficient operation of the market.

A11.1 (f) Efficiency in the implementation and administration of the network code – by making the changes to data fields for both the enduring and foundation stage of the SMART metering programme at the same time will require fewer UNC and therefore further this relevant objective. In addition, the work required to amend the central systems will be carried out in a more efficient manner.

A11.1 (g) Compliance with European Commission and/or the Agency for the Co-operation of Energy Regulators – EU Directive 2009/72/EC encouraged "*the introduction of "innovative" pricing schemes and prescribes cost-benefit analysis (CBA) for large-scale smart meter rollout*"⁶. This directive states that member states are required to install 'intelligent metering systems' – smart meters – to at least 80% of domestic electricity consumers by 2020. The UK Government has chosen to also include the same requirement for domestic gas consumers over and above the EU directive. In order to facilitate this the additional data items have been identified as being required to operate an efficient smart metered environment.

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⁶ <http://www.europarl.europa.eu/committees/bg/studiesdownload.html?languageDocument=EN&file=67391>

5 Implementation

No implementation timescales are currently proposed.

Please note that it is likely that these changes will be required prior to the start of mass roll-out of smart metering in Q1 2014, with Q3 2013 currently being the expected requirement. Implementation timescales will be included in ROM analysis.

6 Legal Text

Text is be provided by Northern Gas Networks and was not available for review by the Workgroup.

7 Recommendation

The Workgroup invites the Panel to:

- AGREE that this modification should be issued to consultation.